From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 02:41:34 1994
From: Fire Bottle archive handler <firebotl@jackatak.theporch.com>
Subject: ...writes that he's running 900V on 6146
Date: Wed, 30 Nov 1994 21:56:56 -0600 (CST)
Message-Id: <9411302156.aa25691@jackatak.theporch.com>

Phil-

> My TS-520S runs about 1,000 VDC plate voltage.

Sounds like it is just about working as designed...

> supply voltages are somewhat higher than the specs in the schematic.

I wouldn't even roll over in my sleep about that... let alone worry for more than a nanosecond.

> there something wrong or incorrectly setup in my TS-520S?

Nope. I sure don't think so.

Remember, many of the comments you are reading are coming from chaps with radios they are lovinglky restoring, and trying to use original tubes... 6146s are readily available, but also limited in supply... there is rightful concern over the availability of tubes in the future, and, us olde phartze know that running everything full clockwise doesn't buy much except worn out equipment... running at 80 or 90% is undectectable at the other end, and makes things last longer between tweaking and repairs...

I have run them for LONG periods in transmitters with 1100+ V on the B+ and the tubes didn't blow up any sooner than those run much lower. However, I also had a pretty signifcant supply of 6146s and wasn't real concerned. In fact, I still have some NIB 6146A bought back around 1977 and stored ever since... an EIMAC 3-1000Z with socket and a pair of solidstate HV rectifiers... I was gonna build a killer amp, but Doug (yep, *the* Doug who got this thread started ;^) bought my Mega-transformer and....   ;^)

So, Phil, stop worrying. Your Kenwood will last a long time as it is. Make sure you have learned how to tune the rig, carefully bringing up the load while dipping and you'll have fun, a good signal, and a rig that'll be here when the dust settles...
73,
Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657 -- all from the mobile! ;^)

Fire Bottle Server (Boat Anchors Get Out and Keep You Warm!)
firebotl@jackatak.theporch.com
Where Old Radios and Fun ... GO TOGETHER!
+----------human interface: root@jackatak.theporch.com-----------------+

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 04:21:49 1994
Message-Id: <9412010805.AA14143@bobcat.etsu.edu>
Date: Thu, 1 Dec 1994 02:03:01 -0600
From: wier@bobcat.etsu.edu (Bob Wier)
Subject: Re: ...writes that he's running 900V on 6146

At 9:56 PM 11/30/94 -0600, Fire Bottle archive handler wrote:

> However, I also had a pretty signifcant supply of 6146s and wasn't
> real concerned. In fact, I still have some NIB 6146A bought back
> around 1977 and stored ever since... an EIMAC 3-1000Z with socket and

I was over at Tucker's in Dallas last week (yup - THE Tuckers) - it was the first time I'd been in there (they have a retail store next to the warehouse). Much interesting stuff, like an ORIGINAL SONY Laser Disk player (model 1000?) for $75.

At any rate, they have lots of analog round case meters, and TUBES. So if you are having problems finding something in particular, they might be worth a call. They will, however, be pricy. When I was there, it looked like two out of the three guys behind the counter were hams (older fellows like (us? Gulp)) - that was pleasant. They also had one set of shelves with a plastic shield over it with several boatanchors marked "Not for Sale" so it looks like somebody there is collecting :-)

73 de WB5KXH

 --   Round Up the Usual Disclaimers!   --
Bob Wier, CS Dept., East Texas State University
   wier@bobcat.etsu.edu - keeper of the
        Photo - 3D,Motorola MC68HC11,
Icom Radio and Overland Trails mailing lists

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 15:53:49 1994
From: rdkeys@csemail (R. D. Keys)
Message-Id: <9412011737.AA112734@csemail.cropsci.ncsu.edu>
Subject: 800 Cycle Naval Aircraft Generators
Date: Thu, 1 Dec 94 12:37:57 EST

I did some digging around in the bilges and found my ancient trusty naval aviation radio training manual, dating from about 1944:

AIRCRAFT RADIO EQUIPMENT

Radio Materiel School
Naval Research Laboratory, Bellevue, D.C.

and was looking at the lesson on generators:

LESSON IX

AIRCRAFT GENERATORS AND DYNAMOTORS

It may be of interest to folks trying to dredge up 800 cylce power for old navy boatanchors. The diagrams were left out because they don't translate well from mimeograph to ascii..... (:+}}.....

GENERAL

Aircraft Radio Equipment operats from a primary power source of either storage batteries, engine driven generators, or a combination of storage batteries and engine driven generators. Where batteries are a source of primary power supply, battery charging generators are installed for the purpose of maintaining the batteries in a state of charge. The type of aircraft in which the radio equipment is to be used quite naturally dictates the type of equipment to be installed and as a consequence, the primary power supply source to be used.

Installations which operate from batteries, utilize dynamotors which are driven by the batteries, to furnish the necessary high voltages for the operation of the transmitting and receiving equipment.

Those installations which require both AC as well as DC for their primary power source, operate from the engine driven generator direct, since the generator to be discussed is of the AC and DC type. In this case, the AC output is used to operate a rectifier system to furnish the necessary high voltages for the transmitter, while the DC output is used to operate the dynamotor for the receiving system, furnish the necessary control voltages, and in addition, furnish the necessary battery charging requirements.

The generators and dynamotors to be found in general usage are manufactured by the Eclipse Aviation Corporation. Two series types prevail: the type AD dynamotors and the NEA generators. For purpose of instruction, the AD-7 dynamotor and the NEA-2A generator will be used since they are representative of their respective types. While it would be highly desirable, time does nopt permit the study of each individual type of a series.

There may be encounterd, from time to time, certain special types of generators not mentioned, bear in mind that these machines are the exception and not the rule. One example of this may be found in an installation which uese a 5 kilowatt DC generator as a primary power source, the radio equipment operating therefrom by means of dynamotors and converters.

NEA-2A GENERATOR, GENERAL DESCRIPTION

The Eclipse Engine Driven Aircraft Generator, Type NEA-2A when used in conjunction with the Type NF-1 Control Box and Type A-1 Generator Cutout, provides alternating current for aircraft radio transmitters and direct current for storage battery charging as well as power requirements for other commonly used electrical devices.

The ratings of the generator are as follows:

Drive Spped Range.	Type NEA-2A
At rated output	2000-4200 rpm
Rotor speed at full load	2400 approx.
A.C. Output Frequency.	800 cycles plus or minus 60 cycles
Volts	120 plus or minus 7-1/2 pct.
Amperes	7-9
Watts	840
Voltamperes	1080 at 120 volts
D.C. Output Volts	14.0 - 14.6
Amperes	30

The type NEA-2A when operated at a drive speed of 1500 RPM will maintain the rated A.C. output with 1/2 D.C. and full A.C. load. However a decrease in frequency and D.C. output will result from reducing the drive speed below the value for rated output. Further decrease in generator drive speed will result in decreased A.C. output as well.

The weight of the NEA-2A generator is approx. 43 pounds.

CONSTRUCTION AND OPERATION

The generator consists of six major assemblies, listed as follows:

1. Mounting Head and Pilot Flange Assembly.
2. Driven Coupling Assembly.
3. Constant Speed Drive.
4. Rotor Assembly.
5. Stator Assembly.
6. Front Head Assembly.

The mounting head assembly is designed for installation on the standard generator mounting flange. The pilot flange assembly, which is secured to the rear of the mounting head with four flat head screws, consists of an oil seal baffle and a ball bearing mounted splined drive coupling. The removable window straps, one solid and the other perforated, are provided on the exterior of the mounting head. The perforated strap is located over the cooling fan at the mounting flange end and fitted with a locating pin to prevent improper assembly. The solid strap is located adjacent to the intermediate head over the constant speed clutch adjusting mechanism. Adjustment of the clutch is permitted upon removal of this strap.

The driven coupling assembly and fan assembly are mounted on ball bearings, held in place with a lock ring, on the drive end of the rotor shaft. The fan assembly, consisting of 36 spot welded vanes, is riveted to the outer flange of the driven coupling. The driven coupling assembly transmits the drive from the engine to the carbon disc clutch plates of the constant speed drive.

The constant speed drive, or drive sleeve assembly, is splined to the rotor shaft and consists of an adjustable carbon disc clutch, the torque setting of which is controlled by a series of counterweights under spring tension attached to the driving sleeve. The constant torque setting may be manually varied by rotating the adjusting cup assembly which is threaded to the counterweight plates. Carbon segments are used in the clutch assembly and are of heavy design to provide for long wear. The constant speed drive unit regulates the speed of the generator to within plus or minus 7-1/2 percent of its adjustable setting which is normally 2400 RPM of the rotor. This value is held, under extreme variations of load at engine driving speeds of 2200 to 4200 RPM, thereby providing the desired frequency of the alternating current output.

The rotor assembly, or armature, serves as the rotating member for the generating of alternating current and as the armature for direct current output.

The stator or yoke assembly consists of the alternating current generator output winding and the field coils necessary for producing the electro-magnetic flux required to provide the alternating and direct current output voltages.

The front head assembly consists of a housing which incorporates the terminal board and direct current brush rigging.

The cycle of operation for the generator is as follows: drive is transmitted from the engine to the driven coupling which in turn transmits torque through the carbon disc clutch to the rotor, causing it to rotate. As soon as the speed of the rotor reaches the required minimum of 2400 RPM, the centrifugal force tending to move the counterweights outward, overcomes the tension of the springs and relieves the pressure on the carbon discs and plates of the clutch. As pressure is released, the carbon discs are free to slip between the plates, resulting in a decreased torque value and a resultant decrease in rotor speed. As the rotor speed decreases, the centrifugal force on the counterweights decreases and the spring tension causes the clutch discs and plates to re-engage. In this manner a substantially constant rotor speed is maintained.

GENERATOR CUTOUT TYPE A-1

The generator cutout, sometimes termed a relay or main switch, is required to prevent the discharging of the battery through the generator when the generator is at rest, or when operating at a speed below that required for battery charging. The cutout, or relay, shown in figure 9-1 consists of a magnetic core having two windings thereon, a stationary contact, a moving armature with a contact and a spring for retracting the moving contact away from the fixed contact. One of the windings is a shunt coil consisting of many turns of fine wire and is

(figure 9-1 omitted)

Figure 9-1

Wiring Diagram of Type A-1 Generator Cutout.

connected across the terminals of the DC output from the generator direct, or across the output terminals of the NF-1 control box when one is used, so as to receive the full voltage developed. The other winding consists of a few turns of heavy wire and is connected in series with the battery circuit when the contacts are closed.

The operation of the cutout is as follows: when the generator is at rest, the contacts are held apart by the retracting spring until such time as the generator has attained sufficient speed to develop a DC voltage of 13.5 volts at which time, the shunt winding is sufficiently energized to attract the armature carrying the movable contact, thereby closing the circuit between the generator and the battery. With the latter closed, a current flows through the series winding which becomes energized by the charging current flowing through the series coil. The pull due to the series winding becoming energized, reinforces the pull of the shunt winding and holds the armature of the cutout closed. This condition is maintained as long as the generator is charging the battery. When the speed of the generator is decreased to a value at which its generated voltage is lower than that of the battery, a momentary discharge of the battery through the series winding takes place. The flow of the current being reversed, the magnetic pull of the series coil now opposes the pull of the shunt coil. The total magnetic pull on the armature is thus decreased to an amount where the spring tension takes control and pulls the armature away from the core, opening the circuit between the cutout and the battery. Under normal conditions, a generator rotor speed of about 1500 RPM will produce an output voltage of approximately 13.5 volts DC.

CONTROL BOX TYPE NF-1

The Type NF-1 Control Box consists of a die-cast lightweight box with 1-3/16"-18 threaded outlets for 3/4 flexible conduit. Snap slides are provided on the cover to facilitate removal. The following units are contained within the control box:

(a) A terminal board is provided for connection to the generator.
(b) A voltage regulator for holding the D.C. constant at between 14.0 and 14.6 volts, thereby regulating the A.C. voltage of the generator to the required value.
(c) An iron core choke and two condensers comprises a filter unit which minimizes the audio and radio frequency ripple or noise that enters the D.C. circuit.

The voltage regulator is mounted on rubber vibration dampeners or shock absorbers, thereby decreasling the effect of airplane structural vibration on the operation of the unit. At the same time, by combining four pluts, (in connections with the supports) a detachable feature is provided. This detachable feature facilitates removal of the regulator for inspection or replacement.

The generator has a fixed shunt field as well as a regulating shunt field, fig. 9-2, which is controlled by the voltage regulator unit. The voltage regulator is of the three contact type.

The voltage regulator, fig. 9-3, consists primarily of a frame on which is mounted a core having a shunt winding connected across the generator direct current terminals. An outer and inner fixed contact are mounted on the frame and a movable contact fastened to an armature, which may contact with either the outer or inner contacts, but not both at the same time. An adjustable retracting spring holds the armature colsed against the outer fixed contact and at the same time holds the armature away from the core, thereby short circuiting the resistor connected between the movable contact and the outer fixed contact. The position of the outer fixed contact can be adjusted by means of the screw on which it is mounted. The resistor unit is located at one end of the box to permit radiation of heat to the outside air.

In addition to the regulator units, the necessary resistance for the regulator windings are mounted on the removable panel board.

The cycle of operation is as follows: The current in the winding and resultant magnetic pull on the armature is dependent upon the D.C. voltage generated. With increasing rotor speed, the voltage increases until it reaches the normal value of 14.0 to 14.6 volts for which the regulator is adjusted. The generator speed at which this voltge occurs varies between 1500 and 1750 RPM depending on the load and temperature of the unit. With a further increase in rotor speed the voltage will tend to rise above the normal value. When, however, this value is exceeded by a very small amount, the increased pull exerted on the armature carrying the moving contact overcomes the tension of the spring and the armature is pulled away from the outer contact, thereby removing the short circuit across the resistor unit, thus decreasing the current flowing through the regulated shunt field of the generator. The rotor speed at which the movable contacts start to regulate is from approximately 1750 to 1800 RPM depending on the load and temperature of the unit.

This reduction of current through the regulated shunt field reduces the magnetic flux of the generator, resulting in a drop of generated voltage. The decrease in generated voltage causes the magnetic pull between the core and movable armature to be reduced. This decrease in magnetic pull, allows the tension spring to pull the movable contact back up against the outer fixed contact, thereby short circuiting the resistor and increasing the flow of current through the generator regulated field.

The opening and closing of the outer contacts takes place so rapidly that the change in generated voltage is not noticeable as the cycle is repeated.

Should further increase in rotor speed with resultant increase in generated voltage occur, even with the resistor in the regulated field circuit, the magnetic pull between the core and the armature increases causing the armature contact to be pulled down against the inner fixed contact. The closing of these two contacts short circuits the regulated shunt field and for all practical purposes no current flows in the field but through the resistor and inner contacts only. The decrease in magnetic flux of the generator with resultant decrease in generated voltage, causes a decrease in magnetic pull on the armature thereby allowing the spring tension to overcome the magnetic pull on the armature and open the contacts. The opening of the contacts causes the current to flow back through the regulated shunt field and before the movable contact can move as far as the outer fixed contact, the generator voltage increases and pulls the armature with movable contact back against the inner fixed contact. As before, the cycle is repeated very rapidly. As the speed of the rotor is decreased the cycle of operation is reversed.

The rotor speed at which the movable contact starts to regulate on the inner fixed contact is approximately 2100 RPM at no load. However the rotor speed at which this occurs depends on the amount of load, temperature of the unit and constant speed clutch setting. With the constant speed clutch properly set and the generator operating at full A.C. or D.C. load, speed regulation will be determined by the constant speed mechanism rather than the voltage regulator, so that the movable contact of the regulator will not regulate on the inner fixed contact, unless the clutch is set too high or the load is too light.

The load taken from the generator, temperature of units, and the two extra windings on the regulator core effect the operation of the unit, but for sake of simplicity detailed discussion has been omitted.

INSTALLATION OF GENERATORS

IMPORTANT: The drive end of the generators, as shipped from the factory, are immersed in oil to prevent rusting. Before installing the generator in the airplane, mount the generator on a test stand and drive at 3000 RPM with full A.C. and D.C. load, until the speed of the armature reaches 2350 to 2400 RPM, at which point all excess oil will be removed from the generator drive.

The NEA-2A is designed for counterclockwise rotation facing the drive end of the generator and are adaptable for mounting on engines equiped with a clockwise generator drive (facing engine drive) having a standard 5" SAE mounting flange.

The Type A-1 Generator Coutout is mounted on the distribution panel or in the Pilot's Switch Box.

The NF-1 Control Box should be mounted where it is readily accessible for inspection and adjustment in such a manner that vibration is reduced to a minimum.

(Figures 9-2, 9-3, and 9-4 omitted.)

AIRCRAFT DYNAMOTOR

The dynamotor is of the fully enclosed type having a low-voltage commutator and brushes at one end and a high-voltage commutator and brushes at the other end. Current is fed to the low-voltage commutator and to the common field winding from the 12-15 volt D.C. supply. Current is drawn from the high-voltage commutator at from 360-425 volts, depending upon the value of the applied low-voltage. Four leads pass from the dynamotor proper to the box, two serving as low-voltage input leads to the machine and two as high-voltage output leads from the machine. The dynamotor unit is provided with two power plug receptacles. Receptacle 175 has two terminals and accommodates the plug of the power supply cable. Receptacle 167 has six terminals and accommodates the plug of a cable to the junction box. A schematic wiring diagram of the dynamotor unit is shown on page 9-11.

The dynamotor is placed in operation by throwing the switch on the ``RECEIVER SWITCH BOX'' to ``AUTO'' or ``MANUAL''. The switch completes the circuit from the power relay coil, 147, to +12 volts through the control cable. When the relay is thus energized, it's contact closes, placing the motor armature in series with a 50 amp. fuse, 148, for protection, and a radio frequency choke, across the battery.

The motor rotates the generator windings with itself, and the generator positive terminal connects through an audio choke to the output. The negative terminal of the generator connects through resistors 151 and 152 to ground, thus providing below ground potential for the receiver.

Condenser 143 is a filter condenser across the motor, 144 is another filter condenser across the voltage divider, and 145 is a third condenser which with choke 146, serves to suppress ripple from the high voltage output.

When the transmitter is used, the power change-over relay connects the generator negative terminal to ground, making the full output available as positive potential above ground.

The following is the manufacturer's rating of the machine:

Voltage	Input	Outupt
	14 volts	425 volts
Current	9 amps.	0.163 amps.

(Figure on page 9-11 omitted.)

****

I don't know if this info will help anyone thinking about 800hz power for old Navy boatanchors, but from what I can see, it should be a simple task to belt up an 1800 or 3600 rpm motor with suitable pulleys to crank the generator (either the whole thing including the constant speed mechanism, or just the AC generator proper) so that the rotor would spin at the requisite 2400 rpm. I did this about 15 years ago using a 3 horse gasoline engine, and it seemed to work fine, back then. The problem would be finding the generators to suit. Newer generators that mated to jet engines and the like don't seem to have enough shaft available to work well, but these old generators, if they can be found should be fairly easily adaptable. If nothing else you could cut away the case to allow access to just the AC generator portion and forget the funky carbon clutch plate constant speed drive.

If I had to make a choice, I would think that one of the 28vdc rotary converters would be easier to do, since 28vdc at 100 or so amps is not a big thing to do. But, the aircraft generators of the old kind should work also, with a little tinkering.

In general, 400 or 800 hz is a real pain, but with some tinkering of the boatanchor kind, it should be possible to make them work.

73
Bob
NA4G

```
From owner-boatanchors@gnu.ai.mit.edu  Thu Dec  1 15:05:26 1994
Message-Id: <199412011719.JAA03564@mozart.bcit.bc.ca>
From: "Colin Schmutter" <cschmutter@bcit.bc.ca>
Date:          Thu, 1 Dec 1994 09:16:53 +0000
Subject:       AC line regulation

Colin Schmutter
Networks and Communications
British Columbia Institute Technology
CSCHMUTTER@BCIT.BC.CA

(604) 432-8858

From owner-boatanchors@gnu.ai.mit.edu  Thu Dec  1 19:22:05 1994
Message-Id: <199412011656.IAA03441@mozart.bcit.bc.ca>
From: "Colin Schmutter" <cschmutter@bcit.bc.ca>
Date:          Thu, 1 Dec 1994 08:53:30 +0000
Subject:       AC line regulation

Colin Schmutter
Networks and Communications
British Columbia Institute Technology
CSCHMUTTER@BCIT.BC.CA

(604) 432-8858

From owner-boatanchors@gnu.ai.mit.edu  Thu Dec  1 19:57:43 1994
Message-Id: <199412011656.IAA03438@mozart.bcit.bc.ca>
From: "Colin Schmutter" <cschmutter@bcit.bc.ca>
Date:          Thu, 1 Dec 1994 08:53:30 +0000
Subject:       AC line regulation

 * This message contains the file 'line.txt', which has been
 * uuencoded. If you are using Pegasus Mail, then you can use
 * the browser's eXtract function to lift the original contents
 * out to a file, otherwise you will have to extract the message
 * and uudecode it manually.
```

```
begin 660 line.txt
M22!A;2!R97-T;W)I;F<@82!(86UM87)L=6YD(%-0(#8P,"!R96-E:79E<BX@
M5&AE('5N:70@=V]R:W,@=F5R>2!W96QL(&5X8V5P=",!T:&%T#0I61D\@9')I
M9G1S('-L:6=H=&QY('=I=&@@8VAA;F=E<R!I;B!F:6QA;65N=",!A;F0@0BL@
M=F]L=&%G97,@9'5E('1O($%#(&QI;F4@=F]L=&%G90T*9FQU8W1U871I;VYS
M+@T*#0I$;V5S(&%N>6]N92!H879E(&%D=FEC92!A<R!H;W<@=&\@<F5G=6QA
M=&4@=&AE($%#(&QI;F4@=F]L=&%G92X-"@T*02!S:6UP;&5R('-O;'5T:6]N
M('=O=6QD(&)E('!R969E<F%B;&4N#0H-"D%N>2!R97!L:65S('=O=6QD(&)E
M(&%P<')E8VEA=&5D+@T*#0I4:&%N:W,L-"@T*0V]L:6X@4V-H;75T=&5R#0I6
B13=#44@-"@T*0U-#2$U55%1%4D!"0TE4+D)#+D-!#0H-"F-H
```

end

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 19:28:03 1994
Date: Thu, 01 Dec 1994 15:11:11 -0600 (CST)
From: Doug Heacock <HEACOCK@kuhub.cc.ukans.edu>
Subject: approx. value of a TS-520S?
Message-Id: <01HK4TG42E6O9HCEKU@KUHUB.CC.UKANS.EDU>

Perhaps it's not a boat-anchor (yet), but a friend whose husband just
became a silent key needs to know how much a Kenwood TS-520S is worth.
Can anyone make a suggestion? Thanks in advance...

73 de aa0ms
--
Doug Heacock | KANREN User Services
heacock@kuhub.cc.ukans.edu | Kansas Research and Education Network

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 13:11:17 1994
From: Anderson_Neal@lanmail.ncsc.navy.mil
Message-Id: <9412011533.AA29725@lanmail.NCSC.NAVY.MIL>
Date: Thu, 1 Dec 94 09:33:00 CST
Subject: Bone Yard Assault Team Meeting

Hi Larry,
     I had forgotten about this one! Thanks for reminding me. I will
probably be there. It's only about a 1.5 hour drive from Panama City.

Neal N4UYR

---------------------- Replied Message Body ----------------------
Date: 11-30-94 3:36pm
>From: {lakeith@wrdis01.robins.af.mil}:ddn:navy

Guess there is going be another Bone Yard Assault in Dothan, Alabama,
this Friday and Saturday. Has anyone been to this hamfest? Is anyone
going, besides me?
73,
Larry, KQ4BY

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 11:31:26 1994
From: rdkeys@csemail (R. D. Keys)
Message-Id: <9412011509.AA112548@csemail.cropsci.ncsu.edu>
Subject: RE: Bristo(l) wrench for R390A
Date: Thu, 1 Dec 94 10:09:53 EST

>
>   Tom NU8D wrote he is looking for a source of bristo(l) wrenches.

> I haven't found any supply of single wrenches. Last Saturday I invested $35.95 for the Xcelite 11 piece wrench set. The only one needed for the R390A is the number 8 size. Seems to work fine.

Top of the line set. Much better than my cheap 4.95 Global set.

>   The RF deck is now on my dining room table (I'm single) while I try to figure out how to clean out all the old gooey axle grease somebody smeared in there.

The axle grease is the real mccoy. It is a relatively common sort of instrument grease, but it hardens with age. Sometimes it can be found in good army/navy surplus stores if you look around. Vaseline is a good substitute and recommended for some radio sets, in the manuals, and should work well there also. RCA manuals recommend vaseline in many instances. Art Collins should not mind too much to stoop to a little vaseline once in a while.

>   Which is it? Bristo or Bristol??? I've seen both, as well as fluted socket. Can anyone shed some light on this trivia?
> Richard N6NAE
>

Bristo is what I have heard and seen over the years, but when I was in the service too many years ago to worry much about it, the wrenches were called:

allen wrench: socket head set screw wrench
bristo wrench: fluted socket head set screw wrench.

Needless to say, we always called them ``allen'' or ``bristo'' wrenches.

Bob/NA4G

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 16:35:08 1994
Date: Thu, 1 Dec 94 11:28:23 CST
From: bill@rosevax.rosemount.com (William Hawkins)
Message-Id: <9412011728.AA10251@texan.rosemount.com>
Subject: RE: Bristo(l) wrench for R390A

Don't know about "bristo", although there have been people named Bristol in the instrument business for years.

Do know that the old manuals for the 390 series described "alinement" where other people use "alignment". Have a friend who can't be depended upon to get the "s"s in the right place in a document. Bristo could have been a typo that nobody caught (or cared about -

it was government work, after all).

Bill Hawkins

From owner-boatanchors@gnu.ai.mit.edu Fri Dec 2 02:16:58 1994
From: TOM.A.ADAMS@mail.admin.wisc.edu
Subject: Deer Hunting Substitute
Date: Thu, 01 Dec 94 22:57 CST
Message-Id: <EC1M5646.EC1M5703@mail.admin.wisc.edu>

to: boatanchors@gnu.ai.mit.edu

Greetings, Troops.

For the last 10 days or so I've been away from work (and out of INTERNET contact), allegedly indulging in deer hunting, one of Wisconsin's three true religions (the other two are Muskie fishing and the Green Bay Packers).

As it worked out, circumstances prevented me from getting much done in the way of Bambi blasting, so I sublimated by chasing DX on 160 with my TCS boat anchor. As I noted before my departure from the system, my TCS has low audio problems. An effort to raise mod percentages with the Mike Murphy modification in ER were a bust. It was therefore decided to go to extreme measures to cure the irritating problem of "20 over S9 but low audio" signal reports.

Mr. T., chief operator of K9TA is pleased to announce that the TCS has been permanently relegated to CW only duty. It has been replaced by a slightly more powerful rig; would you believe a Globe King 500A?

Having worked on and used this thing on a nightly basis for the better part of two weeks, it's time for a users report to help out anyone else who's into getting one running.

Getting the beast to play was, to say the least, an adventure; we went thru a box and a half of 20 amp primary fuses to get it working right!

About a year ago there was a flurry of Globe King messages on this echo. At that time I mentioned that I was working on one, and that over the years I'd heard a number of stories about the rig catching fire while in use.

With those stories in mind, I went thru the RF and modulator decks of a rig who's condition I'd judge as excellent. On first inspection it was clear that the basis of the fire stories was probably factual. There were too many corners cut in the building of this transmitter, and one place they were cut was in the quality and quantity of high voltage components. There are places where leads that carry modulated 1800 VDC were simply passed thru chassis holes, occasionally lined with rubber grommets, instead of being run thru small ceramic feed-thru insulators. The leads themselves appear to be common hookup wire rather than high voltage cable.

In addition, the 4-250 final amplifier is run UNNEUTRALIZED! This in itself scared the bejezuz out of me; who the hell wants a rig where the PA can go into business for itself, turning into a Frankenstein-sized free running oscillator? The designer relied on the chassis shielding alone to seperate tube input from output, hopefully keeping the amplifier stable.

It's hard to say if these rather dubious "features" were the result of poor design engineering, or if they were the result of the bean counters demanding changes on the prototype rig to lower production costs. In any event, the high voltage problems HAD to be addressed.

All HV wiring was torn out of all three decks, and replaced with copper core spark plug wire; it became apparent that this was the only way, after my initial attempts to fire up the rig resulted in the original wiring breaking down to ground and to other wires in the harnesses.

In addition to this measure, the plate, modulation, and rectifier filiment transformers and HV filter chokes were disassembled, and thier leads sleeved with heat shrink tubing at the point where they left the end bells. These are almost 50 year old units, with the leads insulated with (brittle) varnished cotton / rubber coverings.

Despite the HV precautions, we got into trouble when the PA HV supply filter choke began to intermittently break down to it's case. This particular choke is ridiculously small and poorly insulated for the job WRL called on it to do. Further, we had a number of problems with relay contacts welding shut in both the PA and modulator decks, tho this was directly attributable to the HV insulation breakdown problems.

When we first got the rig, the PA plate bypass was blown up (literally). I had replaced it with a 1000 pf Centralab 5 KV ceramic doorknob, but amazingly this cap turned out to be inadequate for the job! It held together for a few tests, but then blew a chunk of ceramic out of it's side, taking out the line fuse. I replaced it with a 500 pf, 20 KV doorknob from an old TV set; so far it's held up. We'll see...

In terms of operation:

The rig is being driven with an old "stand alone" WRL VFO (the 500B has an internal VFO, the 500A doesn't), or with crystals.

Tuneup was a bit novel. Most 50's and later boat anchors were tuned by metering the grid of the stage FOLLOWING the stage being tuned, and tuning for maximum. THIS rig meters the plate of the stage being tuned, and is tuned by dipping to MINIMUM. Not really difficult, but it's different from most other rigs of the era.

It would have been nice if WRL had put in a provision for operation from 220 VAC; a half KW rig is a bit much to power from 110 VAC. It's too tempting to operate it "temporarily" from an existing lighting circuit, rather than putting in the seperate 110 VAC line it really needs.

PA efficiency isn't real spectacular; I wound up getting numbers around 50 to 54 percent in CW. I'm still looking into that, and I suspect a combination of a weak PA tube and inadequate PA bias voltage is the culprit here.

On 7 MHz and above the lack of PA neutralization becomes obvious. Tuning becomes a bit critical in that you've really gotta tune carefully in order to get a clean carrier that's free of modulation. It does NOT, however, get so shaky that you feel that the PA is going to take off on it's own. I'd call the use of an unneutralized PA tube in this rig an acceptable, but not particularly desirable, state of affairs.

On the plus side; the audio is EXCELLENT!!! It looks good on the scope, and I've yet to get a complaint of any kind on the air; in fact, two different guys I've worked have offered to buy the rig from me (after all this work, it ain't for sale... at least not yet). My only gripe is that while the 500B used 811A modulator tubes, the 500A used CBS / Hytron 5514s! Finding replacements is an impossibility or damned close to it, but not to worry; according to the tube tables a 5514 is nothing but an 811 with a 7.5 volt filiment. When these pigs go to the Great Surplus Store in the Sky, all you've gotta do is swap filiment transformers, plug in a pair of 811As, and keep on talkin'.

On CW the note is very good, subject to the caveats given above. Hunting DX with this rig is a ball; the half KW that it dispatches makes the whole exercise a lot like shooting fish in a barrel.

One design idiosyncracy with this rig, which I think can again be attributed to too much cost cutting. On 80 - 10 metres, the rig will feed a 50 ohm load, but on 160 the LOWEST impedance it will feed is 300 ohms! This looks to me like a matter of trying to keep down the capacitance of the tank circuit variable caps, thus keeping down thier cost. This isn't really a big problem tho. On 160 I've been using the Windom that I put up for the TCS, and the rig tunes up very nicely without any kind of antenna tuner. If 50 ohm loads on 160 ARE used, an L network should do the job.

Tom "Mr. T" Adams, K9TA

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 17:01:49 1994
Date: Thu, 1 Dec 1994 12:42:21 -0500
From: Nick England <nick@cs.unc.edu>
Message-Id: <199412011742.MAA25737@altair.cs.unc.edu>
Subject: forward - AM gear for sale

```
please reply to ceustaqu@ohm.elee.calpoly.edu
================================================
>From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>
Subject: AM gear for sale
Date: Thu Dec 01 02:46:26 EST 1994
I have the following AM gear for sale:

Collins 75-A1. Works good but has hole in front panel (can be repaired)
$225.00
Dentron 160-10L amplifier. Uses four 572B tubes. In good condition with
manual. $350.00.
EF Johnson Ranger I. No ptt. Cabinet needs to be refinished. Works good
$175.00
Parts National HRO-50T. Partially working. Has three coils left (B,D and
D). No main tuning knob (sorry). All else there $100.00
Drake 2A with 2AQ and 2AC xtal cal. Works great. Cabinet for q-mult and
rcvr in great condition. Front panel on 2AQ in good condition. Front
panel on 2A worn in some switch areas. Can be refinished/restored. $125.00.

Apache TX-1 parts unit. Has non-stock front panel but all other parts
their. $50.00.

Wanted:DX-100 cabinets (the older take apart round edged style). For
future project.

Contact Cal @ 805-594-0302 or e-mail me at ceustaqu@ohm.elee.calpoly.edu

73's Y'all.
N6KYR

From owner-boatanchors@gnu.ai.mit.edu  Thu Dec  1 16:01:38 1994
Date: Thu, 1 Dec 1994 12:47:04 -0500
From: Nick England <nick@cs.unc.edu>
Message-Id: <199412011747.MAA25748@altair.cs.unc.edu>
Subject: forward - SX24 parts wanted


please reply to dougj@boi.hp.com
========================================
>From: dougj@boi.hp.com (Doug Jackson)
Subject: Old Hallicrafters dial
Date: Wed Nov 30 14:12:27 EST 1994

I hope this the right group.
A friend of mine has, I beleive, a Hallicrafters SX24 that is badly in
need of a dial and dial cover.
The radio he has was damaged by something poking a hole in the front
```

of this radio.

If anyone has one to sell please respond

Thanks,
Doug Jackson

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 23:23:03 1994
Date: Thu, 1 Dec 94 15:53:10 HST
From: jeffrey@math.hawaii.edu (Jeffrey Herman)
Message-Id: <9412020153.AA24354@kahuna.math.hawaii.edu>
Subject: From rec.radio.swap

More BA-related articles from wrecked.radio.swamp - note the BA
telephone collection.

Jeff NH6IL

****

Article: 17359 of rec.radio.swap
>From: af700@cleveland.Freenet.Edu (Allen Tucholski)
Looking for 2 new or used 816 Rectifier tubes.
(866A) will also work.
Allen

Article: 17368 of rec.radio.swap
>From: protector@aol.com (Protector)
Wanted a good or better condition Swan 350 C model Tranceiver and Power
supply/speaker. 350 C model only please. Thanks.

Article: 17372 of rec.radio.swap
>From: ai495@yfn.ysu.edu (Michelle Troutman)
FORSALE: USED & ANTIQUE TUBES
** Over 1200 different types of electron and vacuum tubes. **
These are leftover stock from a family-owned television/radio
repair shop. Most of them have been tested, either on an
Eico 635 or a Mercury 1100 tube tester. All of them are
boxed.
E-mail me for a list: ai495@yfn.ysu.edu

Article: 17387 of rec.radio.swap
>From: daleh@skypoint.com (Dale A. Hagert)

I am looking for a Knight Kit T150 or Heath Kit DX100 transmitter. Also want ok Heath/Knight Kit high impedance head phones mades back in the 60's and 70's, they sold for around $15. If you have or know of any of the above call me collect.
Dale A. Hagert NM0H
3881 Serpentine Circle
Eagan, MN 55122
612-688-7155
email daleh@skypoint.com

Article: 17713 of rec.radio.swap
Newsgroups: rec.radio.swap
ANTIQUE TELEPHONE COLLECTION FOR SALE
I have recently purchased a collection of over 250 Antique Telephones (90% before 1920) and need to resell most of them.
There are complete & original candlestick phones available from $100, complete & original large oak wall phones available from $225, and desk/cradle phones from $25 each (for WE model 302, the standard 1940's/1950's desk phone. Also quite a few of the larger 2-box telephones.
These phones were sorted once before I got them, so there is very little junk.
Most of these are nicer than what you would expect to find at the antique shops.
None of these telephones have been wired to work, but are left in as found, original condition. Please send a SASE for a specific list of available telephones/brands/prices with representative pictures of each type.
I have some photos available, and will be unable to return long-distance phone calls. The best time to catch me at home is after 7:00 PM.
Russ Pate WB4VVN
235 Sandpine Road
Indialantic, FL 32903
(407) 777-1759
rmp@mlb.semi.harris.com

Article: 17718 of rec.radio.swap
>From: billp@cerfnet.com (Bill Power)
I have the following equipment for sale:
Drake TR3 HF XCVR - $120 OBO
  - works on 80m, 40m, 20m, 100watts RF out
  - with AC3 Power Supply
  - with original manual
Drake WV4 VHF Wattmeter - $50
  - 100/1000 watt scales, Fwd & Ref
  - 20mhz - 200mhz
  - no manual
Prices do not include shipping

Mail inquiries to Dave Fehrenbach at billp@cerfnet.com

Article: 17723 of rec.radio.swap
>From: hgibson@pen.k12.va.us (Harold D. Gibson)
Among radios I collect, I am missing a Hallicrafters S-38 or
any of its alpha series. I would be willing to trade a Zenith
Floor Model console for one, or purchase it outright.
Thanks.
Harold Gibson 804-748-1434 or FAX 804-796-7178
E-Mail: hgibson@pen.k12.va.us

Article: 17741 of rec.radio.swap
>From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>
I have the following AM gear for sale:
Collins 75-A1. Works good but has hole in front panel (can be repaired)
$225.00
Dentron 160-10L amplifier. Uses four 572B tubes. In good condition with
manual. $350.00.
EF Johnson Ranger I. No ptt. Cabinet needs to be refinished. Works good
$175.00
Parts National HRO-50T. Partially working. Has three coils left (B,D and
D). No main tuning knob (sorry). All else there $100.00
Drake 2A with 2AQ and 2AC xtal cal. Works great. Cabinet for q-mult and
rcvr in great condition. Front panel on 2AQ in good condition. Front
panel on 2A worn in some switch areas. Can be refinished/restored. $125.00.
Apache TX-1 parts unit. Has non-stock front panel but all other parts
their. $50.00.
Wanted:DX-100 cabinets (the older take apart round edged style). For
future project.
Contact Cal @ 805-594-0302 or e-mail me at ceustaqu@ohm.elee.calpoly.edu
73's Y'all.
As an addendum, I can take offers on certain units so let me know. Cal, N6KYR

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 15:07:10 1994
Date: Thu, 1 Dec 1994 09:38:54 -0700
Message-Id: <199412011638.JAA02540@Freenet.HSC.Colorado.EDU>
From: al511@freenet.hsc.colorado.edu (Robert Neece)
Subject: Re: Hum...Hmmmmmm?

Gary Chatters writes:

>Try listening to your signal with a receiver set to AM mode.

>
>This is not an absolute indication. If the receiver cuts off low audio frequencies you might not hear it. On the other hand the receiver might have its own hum problems.

Correctamundo, Gary. The R-4 series, in particular, is notorious for 120-cycle AC in the audio output. This is a result of design inadequacies, and not necessarily the result of component deterioration. Rob Sherwood, and others, offered after-market audio upgrades to correct the audio problems in one or more of the members of the R-4 series of receivers.

--
73 de Bob, K0KR

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 14:10:18 1994
Date: Thu, 1 Dec 94 10:42:23 EST
From: mallick@ausable.crd.ge.com (John Mallick)
Message-Id: <9412011542.AA23684@ausable.crd.Ge.Com>
Subject: Johnson Matchboxes...why no 160?

As I contemplate changing my 80 meter inverted-V to open wire feedline, I asked myself "How come my Matchbox doesn't have a 160 meter position on the switch?" Both my Ranger and Valiant-I cover 160. Anyone have some historical info on this?

Question 2: Has anyone used the Johnson Matchboxes on the newer (now old) WARC bands? Do they have enough range? What bandswitch positions are optimal? Inquiring BA minds want to know.

73, John WA1HNL

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John A. Mallick WA1HNL                   E-mail: mallick@crd.ge.com
GE Corporate Research and Development     Phone: (518)-387-7667 (W)
Schenectady, NY 12301                     FAX:   (518)-387-6560 (W)
.... ..     .... ..     .... ..     .... ..     .... ..     .... ..
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"Work like hell. Tell everyone everything you know. Close a deal with a handshake. And have fun." --- "Doc" Edgerton

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 22:39:52 1994
Date: Thu, 1 Dec 1994 19:02:21 -0500 (EST)
From: JD Delancy <k1zat@bah.com>
Subject: Re: Johnson Matchboxes...why no 160?
Message-Id: <Pine.3.05.9412011918.A29488-a100000@booz.bah.com>

On Thu, 1 Dec 1994, John Mallick wrote:

> Question 2: Has anyone used the Johnson Matchboxes on the newer (now old) WARC bands? Do they have enough range? What bandswitch positions are optimal? Inquiring BA minds want to know.

Yes. I converted to 450 ohm ladder line and an inverted vee cut for 3500 Khz and use a Johnson KW Matchbox on it. I've use my TS-430 and 30L1 combination on AF MARS at 4593.5 using the 80 meter position as well as 10105 using the 20 meter position without any problem. I found in the 30L1 manual what "range" the amp would cover in what band positon, i.e. 3.5 position goes from about 3.4 to about 5 Mhz. The same "range" appears to work fine for the Johnson KW Matchbox. That chart is:

Operating Frequency	Band Switch Setting
3.4 to 5.0	80
6.6 to 10.0	40
10.0 to 15.0	20
15.0 to 22.0	15
22.0 to 30.0	10

Hope that helps....jd

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 14:19:32 1994
Date: Thu, 01 Dec 1994 11:08:00 -0500
From: CCS_MAH@admin.fandm.edu (Mark Hemlick Ph. D.)
Subject: Mic for TR4-Cw
Message-Id: <01HK4KY66FDEASE0BA@ACAD.FANDM.EDU>

Greetings to all,

My TR4 manual says to use a "high impedance" microphone. What is the typical impedance of such a mic? How can you measure microphone impedance? For example, my digital VOM says my mic element has a DC resistance of about 9.5 K. Is this also the impedance? Now, I also have 500 ohm dynamic and 1.5 K electret mic's. Are there standard value transformers I could use to match these to the TR4? The audio transformers I see in the Mouser and other catalogs look like 4-16 ohm audio output transformers. Where can I get matching transformers for these mic's? Thanks in advance.

73 Mark KA3LFG

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 14:31:44 1994
From: Thomas Bryan <tbryan@mailstorm.dot.gov>
Message-Id: <199412011338.AA06020@mailstorm.dot.gov>
Subject: Need info on Bendix RA-1B

Date: Thu, 1 Dec 1994 08:38:58 -0500 (EST)

Hello,

I need a copy of the manual or a schematic or just a pinout of the power connector or just about any other information on a Bendix RA-1B aircraft receiver. It covers 150kHz-15MHz and looks like it was made about 1940 for Canada? Any information would be appreciated and of course all costs will be reimbursed.

Thanks

Tom Bryan
tbryan@mailstorm.dot.gov

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 20:10:31 1994
From: DLSTIN@egg.nv.doe.gov
Message-Id: <seddd4b9.099@egg.nv.doe.gov>
Date: Thu, 01 Dec 1994 13:46:16 -0800
Subject: Old German Rubber

I have a set of earphones "liberated" from a Nazi He111 bomber
that crashed during The Blitz. They're beautifully crafted but
getting old.
The black rubber earphone cups are drying out and beginning
to crack. There's already a 1-inch open crack on one of them.
Is there anything that will re-condition this rubber and make it
plyable again? I can fix the crack if I can get the cups off, but
doing it now would destroy them. One friend said to glob
petrolium jelly on the rubber and let it sit for a month.
Another suggested an automotive product called RU-LUBE
that might do the job. Any insight??
Also, the headband is covered with a finely grained, very thin
black leather. It's also dry, but isn't cracking....yet.
Can I use Neatsfoot Oil, Mink Oil or something like that
to restore it?
The cloth on the cloth-coverd wire is getting fragile, too.
Anything that will help this?

Thanks, Folks!   Dave AB5S/7

REPLY: DLSTIN@EGG.NV.DOE.GOV

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 23:10:03 1994
From: janderson@polycom.com
Date: Thu, 01 Dec 94 17:21:24 PST

Message-Id: <9411017863.AA786331284@ccsmtpgw.polycom.com>
Subject: Re: Old German Rubber

With regards to preserving the leather of the headphones, you can probably use the same techniques that are used in book restoration. Books on this subject are usually found at your public library.

As a matter of fact, I happen to have one here (by coincidence, I checked it out last night!): "Cleaning and Repairing Books," by R.L. Shep. Regarding leather covers, he states:

"There is always a lot of talk about what different people like in the way of products to use on leather. There are a lot of products available, and I will mention a few of them.

The British Museum puts out a leather wax. I understand that the basic formula is:

40% anhydrous lanolin
60% neatsfoot oil

which you cook in a double boiler. Frankly, I find it very sticky.

Another formula often mentioned is:

50% neatsfoot oil
50% castor oil

Some people recommend just plain vaseline. You might want to check with your local bindery to see if they have a good all-round leather dressing.

I use either Renaissance Wax or Anthony's Leather Dressing.

Potassium lactate is recommended to clean and preserve leather. It will prevent rotting, but it will not cure it once it has started. I find that Lexol is a good leather preserver, and you can get it at many shoe stores, but I probably would not use it on a really valuable book until I had checked with a conservationist."

(end of quotation).

I hope this helps.

- Jeff, WA6AHL

P.S. If you know of a way to get rid of musty smells in old books,
let me know!

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 11:00:43 1994
Date: Thu, 1 Dec 94 08:54 EST
From: Emil Switzer <SWITZER+_E%A1%Electromagnetic_Sciences@mcimail.com>
Subject: RE Panel Templates
Message-Id: <80941201135408/0006082972NA5EM@MCIMAIL.COM>

To: Boatanchors
To: Jack Taylor

Jack Taylor asked if there is any info available on using CAD to generate panel templates on old equipment.

There is an excellent article by Ron Eisenbrey KC5DFX in the Feb 1994 issue of Electric Radio.

73, Emil

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 17:58:32 1994
From: HUMPHREY_RICHARD/HP5200_15@hpflash.rose.hp.com
Date: Thu, 1 Dec 94 12:55:00 -0800
Message-Id: <"d09k:KH000000000*"@MHS>
Subject: RE: RCA tube boxes

RE: RCA tube boxes, logos and the small print.
I knew the end was coming when, back in the '70s, I bought an
RCA tube and noticed the following printed on the flap:
"Distributed by the Special Products Division"
I wondered when tubes had become a special product and not a
commodity. Yes, that was the beginning of the end.
Richard N6NAE

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 19:32:35 1994
Date: Thu, 1 Dec 94 13:22:52 -0800
From: anders@autopsy.corp.sgi.com (Greg Anders)
Message-Id: <9412012122.AA06058@autopsy.corp.sgi.com>
Subject: Request to subscribe

I was once a subscriber who dropped out whilst on an extended vacation. If its still open I would like to resubscribe and would appreciate info on how to get back into the fold.

thanks,

Greg Anders

"One doesn`t discover new lands without consenting to lose
sight of the shore for a very long time."

Andre Gide
French Novelist

Manager, Strategic Services, SGI.
anders@autopsy.corp.sgi.com
KG6YV

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 16:36:52 1994
Date: Thu, 1 Dec 1994 10:36:05 -0800 (PST)
From: Stephen Lee <slee@u.washington.edu>
Subject: SB-610 & Ripple
Message-Id: <Pine.A32.3.91b.941201102239.66060B-100000@homer19.u.washington.edu>

Ok, folks...been reading up on my SB-101 manual along with the SB-610 manual. I use both pieces of equipment and have also noted ripple on my output waveform. According to my SB-101 manual, there is supposed to be ripple on the output waveform. This is most noticeable during transmissions in CW mode. My manual says if the ripple isn't there, then I've got problems. I suspect the T-4XC behaves similarly. BTW, my SB-101 uses 6146B finals...is that what the T-4XC uses? I would venture to say that if the T-4XC is getting out just fine and the signal reports are just fine then the rig is working properly.

Stephen Lee

KC7AVB

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 08:14:04 1994
Date: Thu, 1 Dec 1994 04:22:10 -0800
Message-Id: <199412011222.EAA15486@ix2.ix.netcom.com>
From: jlockwd@ix.netcom.com (Jim Lockwood)
Subject: Subtle Drake 2B muting problem

Here's a repair hint that may save someone else a bit of time and aggravation:

A Drake 2B I picked up a few months ago refused to mute itself when I moved the slide switch to Standby. The cause was a defective bias adjustment pot in the AVC circuit. This is R48 on the schematic and I think it was labled "SENSITIVITY" on the rear panel.

The defect, despite what you might think, wasn't that it was scratchy or open. That would have been easy to detect. This pot had developed a very high resistance leakage path to ground....something on the order of a megohm or so. It's value is 2M so the leakage resistance was an appreciable fraction of its own value. As a result, it wasn't possible to make muting work correctly by setting the AVC bias. In fact it wasn't possible to even set the AVC bias correctly.

After unsoldering lots of other failure candidates in the AVC line, and getting nowhere, I mechanically disconnected the pot from the chassis. This electrically isolated the pot and immediately, the STBY-RCV switch worked properly.

Probably no other 2B in the world will develop this same failure symptom, but if it does, maybe its owner will have been lucky enough to have seen this and will remember one possible cause.

73,

Jim - km6nk

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 07:19:06 1994
Message-Id: <n1425870652.91692@cpqm.saic.com>
Date: 1 Dec 1994 06:19:20 U
From: "Bob Scott" <Bob_Scott@cpqm.saic.com>
Subject: Surplus News

Got this off a Navy bulletin I get monthly. Thought you all might find it of interest.

NNS000. Toll-free Phone Number Provides DoD Surplus Sales Info
WASHINGTON (NNS) -- The Department of Defense has set up a toll-free telephone number to help people interested in buying surplus DoD property. The new number is 1-800-GOVTBUY (1-800-468-8289).

When property is received at the Defense Reutilization and Marketing Office (DRMO), it is first looked at for reuse within DoD or the federal government. If the property cannot be reused, it becomes surplus to the needs of the government and may be donated to state and local agencies before sale to the public.

As a result of the drawdown, DRMOs are receiving more property than ever before. Some of it has never been used, and a lot of that property is being offered for sale as surplus.

The surplus property is sold locally and nationally. If you are interested in national sales, call 1-800-222-3767 to get a copy of the "How to Buy" pamphlet and be placed on the bidders list. If you are interested in local sales but need more information about your local DRMO, call the new number 1-800-GOVTBUY.

And for historic purposes....

-USN-

NNS000. This Week in the Navy: Dec. 3, 1775 -- LT John Paul Jones hoisted an official American flag on a ship (the Alfred) for the first time.

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 14:49:26 1994
Date: Thu, 1 Dec 1994 11:05:01 -0500 (EST)
From: Tony Stalls <rstalls@access.digex.net>
Subject: Re: Surplus News
Message-Id: <Pine.SUN.3.91.941201103529.14092A-100000@access1.digex.net>

On Thu, 1 Dec 1994, Bob Scott wrote:

> Got this off a Navy bulletin I get monthly. Thought you all might
> find it of interest.
>
> NNS000. Toll-free Phone Number Provides DoD Surplus Sales Info
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> free telephone number to help people interested in buying surplus
> DoD property. The new number is 1-800-GOVTBUY (1-800-468-8289).

Bob,

I used to visit the Washington Navy Yard regularly bought bona fide boatanchor radios and got some really drool-worthy stuff. They sold things in single item types like a pallet load of Kleinschmidt teletype machines (I got a dozen for $75), etc. I was on a mailing list and got announcements on a regular basis. However, that was about 15 years or so ago.

Back in the Summer, I went on a boatanchor quest and visited the GSA and Ft. Belvoir property disposal facilities. I found they've now gone to larger lots that were apparently designed for commercial junk dealers and there isn't as much emphasis on smaller stuff. For example, there were four Harris radio sets with some kind of heavy duty HF amplifier to die for. Unfortunately, it was a part of a lot of stripped out PC's (it's now SOP to remove and destroy hard drives before disposing of the PC), heavy machine tools, etc. that filled a warehouse and parking lot. There were three diesel generators that looked like they were salvaged from the Titanic and could have at one time lighted New York City - probably 10 tons of dead weight each. It looked like they just bulldozed enough in to fill the building and put it up for bid.

Anyway, I also signed up for mailing lists, but they no longer maintain them and only tell you of the next sale. If you miss that one, you have to start the whole process over.

For those living in the Washington/Northern Virginia area, the GSA has walk-in fixed price sales on Friday mornings at the GSA facility in Springfield where you can buy government surplus furniture very inexpensively. It's a great place to furnish home offices and hamshacks. Occasionally they have nice goodies like laptop computers (without hard drives again) for $50.

As an aside on the big lot I mentioned, with all the heavy machine tools, I figured that the buyer wouldn't want the radio sets, or maybe even know what they were, so I called Fair Radio and told them about them and asked what they would give for three of them and explained that I just wanted to keep one. I found out who the successful bidder was and tracked him down after the sale. It turned out that he had bought the lot to get the radios and that Fair Radio had offered less than 1/4 of what they were worth.

Oh well... You live and learn.

73,

Tony
K4KYO

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 18:45:02 1994
Message-Id: <199412012048.PAA28432@geech.gnu.ai.mit.edu>
Date: Thu, 1 Dec 94 13:38:33 MST
From: Jack Taylor <n7oo@huachuca-emh8.army.mil>
Subject: Re: Surplus News

The Defense Reutilization Management Office (DRMO - usta be PDO) here at Fort We-Gotcha also has a Friday walk-in sale. I went once and didn't see much, but what they had (old AT computers) was on "sale" for $300.00! Condition unknown.

Usta go to the PDO auctions as well, but if you don't buy something each time, they drop you from the announcement list...I did pick up quite a few odds 'n ends until the commercial dealers came in and bid the prices up out of sight!

Yes, I've recently heard rumors of a tactical HF radio van being turned in. A number of them, actually. The story goes that it is a 10KW system and that two of them with just the 1 KW exciter and receiver portions (less the van) were picked up to be distributed to local army mars members. The catch was, they had to bring a truck with which to take em away in :-)

73 de Jack

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 13:24:36 1994
From: Scott Turner <scott@hpislst.lvld.hp.com>
Message-Id: <9412011605.AA09861@hpislst.lvld.hp.com>
Subject: Re: Thanksgiving Day AMI Bash - Colorado
Date: Thu, 1 Dec 94 9:05:35 MST

>
> What's the frquency Kenneth??
> Dan -- WA0JRD
>

Why 3876 er ...7, no ...6, no 7, no 5. At least until somebody came in with a rock-bound xmitter and got everybody to zero him.

Scott Turner KG0MR scott@hpisla.LVLD.HP.COM

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 15:06:29 1994
From: DMCorney@aol.com
Date: Thu, 1 Dec 1994 12:32:06 -0500

Message-Id: <941201123150_3039260@aol.com>
Subject: The Boat Anchor Wisdom List

subscribe

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 22:30:27 1994
From: azoth@netcom.com (Az0th)
Message-Id: <199412012149.QAA22671@netcom.netcom.com>
Subject: The Time Has Come, The Walrus Said....
Date: Thu, 1 Dec 1994 16:49:54 -0500 (EST)

Fellow BoatAnchorites,

I know this will sound familiar, but I'll say it one more time for effect: I'm all out of room, and something, as much as it pains me, has got to go.

Having just added a bevy of Drakes (er..gaggle? flock?), with more on the way (B-twins), I expect to become the keeper of yet another R-390A (refurbished, recalibrated and with covers intact: yum!) My wife only smiles, since she knows I have no place left to put it all.

Now, I'm working feverishly to get my ham ticket, which opens up a whole new realm of things to make, buy and do; I had an FCC First + Radar, back when there was such a thing, and worked in radio professionally for some 15 years before becoming a software engineer, but the code always escaped me. Well, I'm testing now at 90% at 8 wpm, and expect to see 100% at 20 before Spring. So, by next Summer at the outside, I'll be needing a few things.

Here's what I have to trade:

A Hammurland HQ-170AC with Speaker, original manual and even the original box the first owner bought it in. It's all original, VERY clean and fully functional, even the electric clock. It sounds soooo good. I don't have the optional VHF converters for it, though.

A National HRO-60T, with coil sets A, B, C and D, no speaker and a good copy of the manual. This one has had all the wax caps already replaced with orange drops, and I replaced the second mixer tube to fix the earlier intermittent operation on the high bands. There's one tuning scale missing, but since it duplicates the bottom half of one that's there, I haven't tried replacing it. It works fine on all bands, and is in very good cosmetic and mechanical condition, with all the original knobs, markings and paint. Somebody along the line cut out several of the vent slots on the back panel so he could stuff the line cord in, and it's got an SO-239 that's not, I think, original. Sounds and looks marvelous, and that big HRO tuning knob is pure sex.

What I'm looking for:

Drake stuff; I've got a real Jones for Drake radios. The last person I asked about an FS-4 laughed in my face, so I won't even suggest it, but I'm looking for a C-4 and MN-4 to round out the station, and perhaps a nice TR-4CW, or a T-4XC to match my R-4C, just for the sake of variety. Maybe even an SW-4A, or a 250Hz narrow filter for the R-4C.

NIB JAN 6JB6s? };-]

A Hallicrafters Tx to match my SX-115. Hmmm. What would that be, an HT-32 or HT-37 maybe? Somebody have a pretty '37 gathering dust?

Similar vintage Vibroplex bug.... Stuff like that. I guess I'll need to add a mike to the B-line eventually, but CW's turning out to be so much fun that I'll probably just pound brass for a while.

Anyway, I'm in Herndon, VA. I can ship the radios, but I'd much prefer not to, especially the HRO; it's HEAVY. The Hammurland has that perforated glow-in-the-dark case, and weighs a lot less. I'd also be willing to drive a moderate distance to meet or deliver.

Cheers & 73,

RF Buchanan

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 13:29:50 1994
Date: Thu, 1 Dec 94 11:06:19 EST
From: Greg Wasik <greg@willie.nl.nuwc.navy.mil>
Subject: Re: trivia question...
Message-Id: <AB035EAB@willie.nl.nuwc.navy.mil>

>Is it "RCA"??
>

Yes, It was the slogan on an old 40's tube box.. Until they adopted "The most trusted name in electronics" (I guess by then they were getting out of the tube business). finally on a later 70's tube box, they dropped their cool logo and just had block letters : RCA. No slogan now but printed on the side of the box

was "Country of origin printed on box" . Its just a reflection of the sad
demise of the industrial base of our country.

...Greg

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 16:31:50 1994
Date: Thu, 1 Dec 1994 13:04:54 -0500 (EST)
From: JD Delancy <k1zat@bah.com>
Subject: Re: trivia question...
Message-Id: <Pine.3.05.9412011352.A19876-7100000@booz.bah.com>

> >Is it "RCA"??

Real Crudy Apparatus according to W5RJS

From owner-boatanchors@gnu.ai.mit.edu Fri Dec 2 04:21:33 1994
Date: Thu, 1 Dec 94 21:23:24 HST
From: jeffrey@math.hawaii.edu (Jeffrey Herman)
Message-Id: <9412020723.AA00754@kahuna.math.hawaii.edu>
Subject: Wanted: Drake ac-3/4; Really old tubes

Here's a couple more from wrecked.radio.swamp // Jeff NH6IL

****

Article: 17746 of rec.radio.swap
>From: q@wx8l.tacom.army.mil (Sean (WX8L))
Im in need of a Drake ac-4 or ac-3 power supply for a local old timer
who wants to get on the air.
(810)573-9277
Sean McCarthy q@wx8l.tacom.army.mil

Article: 17748 of rec.radio.swap
>From: rmp@cica.mlb.semi.harris.com (Russ Pate)
WANTED: REALLY OLD VACUUM TUBES
I would like to start a collection of
really old vacuum tubes, like the ones
shown in the 1976 Vintage Radio Book.
I am not interested in OA1's, 6AK6's
or anything like that. What I am looking
for are tubes made between 1905 and 1915,
or any tubes made by Western Electric, particularly
VT1's, VT2's, 20X's, 21X's, or large transmitting

tubes by Western Electric, but definitely pre-1920. Anything
that appears to be experimental or handmade would
be of interest also, like a Deforest Audion (I wish).
Russ Pate WB4VVN
235 Sandpine Road
Indialantic, FL 32903
(407) 777-1759
rmp@mlb.semi.harris.com

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 14:03:05 1994
From: m266008@stlmail2.mdc.com
Message-Id: <199412011657.LAA23659@geech.gnu.ai.mit.edu>
Subject: Wanted: Heath SB400/SB401
Date: Thu, 1 Dec 94 10:53:31 CST

Wanted: Heath transmitter to match SB300 receiver, SB400 or SB401.
Condition: any, as long as it's (relatively) complete. Basket-cases
OK. THX. N0XEU Matt (314)962-1418 eves, 'reply' to sending address.

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 17:56:17 1994
From: KANAMAA%AMGATE%MATRXA@randb.abbott.com
Date: Thu, 01 Dec 1994 14:19:45 -0600 (CST)
Subject: Weird Xtals/UK surplus
Message-Id: <01HK4RQN7702FOZXCK@RANDB.PPRD.Abbott.Com>

>From: Kana, Michael (D9CY)
Date: Thu, Dec 1, 1994 2:13 PM
Subject: Weird Xtals/UK surplus
To: boatanchors
Howdy all.

A double barrelled question...

1) In the recent CQ there was a nice article on suplus gear from
the UK and Canada. I was wondering if there are any UK equivalents
of Fair Radio who deal in such things. Occasionaly I see adds for
Toronto Surplus and they seem to get neat stuff once in a while.

2) While I was goofing off at my folks house in TX, I found a box
of crystals for a radio set that covered the 200mhz-300mhz band.
The crystals look like little round cans and have axle leads. Their
fundamental was in the high 20mhz/low 30mhz range. The set was
near complete and only was missing about 7 xtals. What kind of
set did these things go into? Can these radios still be found?

73's de AA9IL

Mike Kana

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 22:41:21 1994
From: TOM.A.ADAMS@mail.admin.wisc.edu
Subject: Wierd Crystals
Date: Thu, 01 Dec 94 17:26 CST
Message-Id: <EC1H2628.EC1H2654@mail.admin.wisc.edu>

to: boatanchors@gnu.ai.mit.edu

Hello Mike.

Re. strange, "barrel" crystals:

I've encountered these critters in two different sets. Both were Korean War vintage surplus jobs.

One rig was the URC-4 "Bailout" radio. This thing was issued to pilots well into the 1950's. It ran AM voice and A2 (tone modulated CW), in either manually keyed form or as a continuous "beacon" signal to lead in rescuers. It ran on 2 frequencies derived from one rock; both were international distress frequencies 121.5 MHz and 243.0 MHz (one at a time only!). The receiver was a superregen.

The other radio is the one that your set of rocks most likely came from. That is the URC-35 receiver. This thing was a 225 - 400 MHz AM rig, rack mounted, that had a tunable or crystal control option. I had one once; it had the sensitivity of a concrete block with knobs. It was about ten times more complicated than it needed to be (would you believe a push-pull version of the cascode RF amplifier circuit in the front end?), and it weighed a ton. I finally put it at the curb with the garbage one night, and within an hour some CBer pulled over and excitedly hustled it into the trunk of his rustmobile.

Mr. T. , K9TA

From owner-boatanchors@gnu.ai.mit.edu Thu Dec 1 16:25:38 1994
From: WaltN@aol.com
Date: Thu, 1 Dec 1994 12:59:31 -0500
Message-Id: <941201125841_3057746@aol.com>
Subject: WTB: SX-17

I am looking for an SX-17 in good to excellent condition. Please email with details and price.

tnx,
Walt